## **Environmental Management**

## **Nuclear Material Consolidation and Processing**

- 1. Work in collaboration with NNSA to develop and implement comprehensive and long-term plans for consolidation, safe storage, and disposition of plutonium
- Utilize unique facilities and capabilities at SRS to process excess nuclear materials and spent nuclear fuel for reuse (e.g. commercial power reactors) or provide safe storage pending disposition
- 3. Develop alternative approaches that maximize risk reduction of excess nuclear materials and spent nuclear fuel

## **Liquid Waste Disposition**

- 4. Remove radioactive liquid waste from underground tanks, significantly reducing the greatest risk to health and the environment and preparing tanks for operational closure
- 5. Process radioactivity from tank waste into DWPF (Defense Waste Processing Facility) glass canisters for final disposal out of state and dispose of chemical constituents from tanks in grout in the on-site Saltstone Disposal Facility
- 6. Develop alternative approaches that maximize risk reduction for tank waste disposition

### Solid Waste Disposition

- 7. Complete disposition of solid radioactive legacy waste and minimize newly generated waste.
- 8. Complete consolidation of wastes for treatment processing into new storage facilities in compliance with RCRA (Resource Conservation and Recovery Act)

#### Area Completion Project

- 9. Utilize funding from 2009 Recovery Act to accelerate the EM cleanup mission and achieve industrial footprint reduction of 67% by the end of 2011, while creating or saving more than 3,000 jobs
- 10. Clear large areas of the Site for potential future use with large-scale, integrated actions for addressing contaminated soils and groundwater remediation and facility deactivation and decommissioning.
- 11. Close large buildings in place (i.e. in situ) following removal of contaminant sources

### Site Services and Infrastructure

- 12. Install a new Biomass Cogeneration Facility to replace existing coal-fired cogeneration plant by the end of 2011
- 13. Improve and maintain Site infrastructure
- 14. Manage technical challenges of aging systems and equipment to avoid risk of outages and mission disruptions
- 15. Develop and implement a plan to reduce greenhouse gas emissions at SRS
- 16. Incorporate long-term Site legacy management activities under regulatory requirements and DOE Orders into Site planning

## **Environmental Management (Cont)**

## Environmental Quality

- 17. Ensure protection of human health and the environment is factored into mission development and execution.
- 18. Maintain compliance with environmental permits, clean-up agreements and decision documents
- 19. Integrate site-wide regulatory permitting-strategies to ensure operational and future mission flexibility
- 20. Promote long-term stewardship of SRS natural, archeological and cultural resources
- 21. Manage the Site focusing on objectives of "Greening the Government" and setting an example for industry in environmentally friendly industrial activities.

#### SRNL

- 22. Position SRNL for transition into a financial self-sustaining business unit
- 23. Establish SRNL as a preferred partner for industry, universities and small businesses in developing leading edge technologies in support of industrial, economic and educational strength of the United States
- 24. Expand and mature SRNL's role as the EM Corporate Laboratory and lead a growing EM Engineering & Technology program to reduce the risk associated with legacy defense nuclear and industrial cleanup.
- 25. Develop and implement major new initiatives in the form of Centers of Excellence to provide science-based approaches to the DOE-EM mission.
- 26. Establish SRNL in a leadership role for hydrogen storage, production, and delivery technology development.
- 27. Translate SRNL's historic strength in hydrogen storage and materials science into the basis for a new generation of robust, long-life, energy storage technologies.
- 28. Develop regional, national, and global partnerships that extend SRNL's capability to utilize biotechnology and renewable energy sources to achieve sustainable energy independence.
- 29. Apply skills developed in environmental management and atmospheric sciences to develop new and innovative approaches to carbon cycling, attribution, capture, and sequestration.
- 30. Continue SRNL's leadership role in tritium technology and component evaluation programs that ensure the safety and reliability of the Nation's nuclear deterrent.
- 31. Expand SRNL's role in providing critical intelligence collection, analysis, and products that enable best-informed decisions by federal agencies and policy makers.
- 32. Become a highly valued applied science resource for National Security and Homeland Security agencies fighting threats from terrorism.
- 33. Enhance SRNL's impact on global security through broad participation in the Nation's nuclear nonproliferation efforts.
- 34. Establish a sustainable Department of Defense support effort in conjunction with appropriate partner institutions and companies.
- 35. Secure additional sponsors, missions, and funding, including development of enduring funding sources, to support Laboratory infrastructure to meet laboratory needs for future growth while sustaining safety performance excellence

## **Environmental Management (Cont)**

## Safety and Security

- 36. Integrate safety and security into every element of mission accomplishment, and enhance the "safety first" culture to safeguard employees and assets
- 37. Establish safety programs and processes that continuously improve safety and security performance
- 38. Ensure that SRS Emergency Preparedness processes, systems and organizations meet all federal and state requirements

### Management Excellence

- 39. Foster a corporate perspective and a teamwork culture through communication of a common vision
- 40. Ensure the SRS workforce is diverse and appropriately sized and aligned to achieve the Site vision
- 41. Enhance SRS leadership, administrative and technical skill base while ensuring a diverse and professional work environment
- 42. Establish a corporate, performance-based approach to manage site assets and resources that links planning, budgeting, implementation and evaluation to program mission projections and performance outcomes
- 43. Implement solid financial and performance based management systems with metrics that help management to improve efficiency and sustainability
- 44. Insure integration of Site contractors to ensure efficient completion of missions
- 45. Continuous improvement of Business Systems cost-effectiveness and performance through process, procedure, technology and communications enhancements
- 46. Support development of potential future missions and opportunities for SRS

## <u>NNSA</u>

## Defense Programs

Science, Technology, and Engineering

- 47. Leverage tritium knowledge and resources to support Inertial Fusion Energy research through the support of the National Ignition Facility
- 48. Develop partnerships with the scientific community to exchange new research on tritium, deuterium, hydrogen, and helium 3
- 49. Become the premier hub for applied hydrogen research, specifically hydrogen isotopes separation and storage technology

Infrastructure and Resources

- 50. Transform the infrastructure to support modern stockpile stewardship requirements as well as to reduce energy usage, GHG, and nuclear waste associated with Stockpile Stewardship and Management
- 51. Lead the Nuclear Security Enterprise in governance reform by rethinking the corporate management structure, supply-chain, procurement, etc.

**Nuclear Stockpile Management** 

- 52. Maintain and support U.S. nuclear weapons stockpile to meet national security requirements
- 53. Serve as the nation's main supplier of He3 and tritium

#### Nuclear Nonproliferation

- 54. Design, build, and operate facilities to convert nuclear weapons components to commercial nuclear mixed oxide (MOX) fuel
- 55. Provide R&D and management support for the US-Russia nuclear nonproliferation agreement that provides for the safe, secure return and disposition of weapon grade nuclear material from various countries to the United States and Russia
- 56. Maintain flexibility within the facilities to accept and process new plutonium sources and to develop capability to manufacture new nuclear fuel types as the need arises
- 57. Work with agencies worldwide to secure spent fuel and other nuclear materials
- 58. Deploy nuclear detection, inspection, and monitoring equipment worldwide